NASA Project Management Challenge 2009

PROJECT MANAGEMENT CHALLENGE 2009

Sixth Annual NASA Project Management Seminar

ABSTRACT AND BIOGRAPHY

The Art of Systems Engineering - Leadership Behaviors for Success

What does it does it look like when Systems Engineers not only practice the science of engineering space systems, but also the art of Systems Engineering? As projects become increasingly more complex, NASA understands that it is vital to grow and develop a cadre of highly trained and skilled Systems Engineering who will be available to ensure the continued success of future missions. It is not enough to focus only on the science of engineering space systems – that is only half the story. The other half of the story is the art of Systems Engineering. But what does that entail? To understand the answer to that question, NASA sought to characterize the behaviors of highly successful Systems Engineers across the entire agency. These Systems Engineers work on different types of programs and projects in diverse environments across the country.

To accomplish that objective, the NASA Office of the Chief Engineer launched the Systems Engineering Behaviors Study in April 2008. The goal was to study how highly regarded Systems Engineers at each of the ten NASA Centers practice the art of Systems Engineering. This study is part of the larger Systems Engineering Excellence Initiative, and is in response to an agency-wide Systems Engineering workshop held in March 2008. The study was conducted by personnel from each of the NASA Centers who are trained in psychology or organizational behavior and certified to administrator and interpret the Myers Briggs Type Indicator (MBTI®). The study involved interviewing, shadowing, and observing 31 highly regarded Systems Engineers and administering the MBTI to them to identify their personality type. Once the data was compiled, it was then analyzed for common themes and grouped into clusters of competencies with associated behaviors. Once the initial analysis was complete, it was reviewed and concurrence was sought with the interviewees on the overall competencies.

This session will detail the competencies and associated behaviors for each of the themes in depth, and summarizes the typical MBTI® profiles of the Systems Engineers studied. It discusses some potential uses of these results to provide a more balanced picture of Systems Engineering and to train and develop NASA's current and future Systems Engineers.

Christine Williams
Director, Systems Engineering Leadership Development Program
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Chris serves as the Director of NASA's Systems Engineering Leadership Development Program. A federal employee for 31 years, she started her career as an Oceanographer with the Navy and joined NASA as an Administrative Officer for the Applications Directorate at GSFC. She progressed as a manager in several functions including business management, logistics, continual improvement, and finally human resource development. Outside NASA she served on Vice President Gore's National Performance Review, was twice elected the Chairman, of the Council for Excellence in

Government's (CEG's) Senior Fellow's Program and currently serves on the Executive Committee of the Conference Board's Executive Coaching Council. Recent award include CEG's Senior Fellows Award for Leadership in Action (2007) and NASA's Outstanding Leadership Medal (2006). Chris received a BA in Oceanography from Catholic University and graduated summa cum laude from John's Hopkins University with a Master of Science Degree in Organizational Development and Applied Behavioral Science. In 1999, Chris received a fellowship to attend the Harvard Business School's Executive Program in Management Development. She is also a certified executive coach.

Mary Ellen Derro
Senior Leadership and Organizational Development Specialist
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Mary Ellen Derro serves as a Senior Leadership and Organizational Development Specialist at the Jet Propulsion Laboratory. She is trained in psychology and organizational behavior, and is completing her M.S. in Organizational Behavior. As a member of the People Element of the Systems Engineering Advancement Project, she developed the Systems Engineering Competency Model, and serves as a behavioral coach to the JPL Systems Engineering OJT program. Before coming to JPL, Derro worked as a management consultant for Right Management. Prior to that, she held numerous leadership positions in human resources at Bank of America.